

the output stage of said programmable current source has a said switching diode connect to said switching signal therein for synchronizing said slope signal.

4. Adaptive slope compensator in accordance with claim 1 wherein said programmable current source comprising
  - a pnp transistor for the current control;
  - an emitter resistor connected between the emitter of said transistor and a constant voltage source for the current setting;
  - a base resistor connected between the base of said transistor and said constant voltage source for providing the bias to said transistor;
  - a said input resistor operatively connected to the base of said transistor and said voltage feedback loop for programming the magnitude of said programmable current;
  - wherein said programmable current is linearly responsive to said signal of said voltage feedback loop;
  - a filter capacitor positioned in the base of said transistor to eliminate the switching noise of power converter.
5. Adaptive slope compensator in accordance with claim 1 wherein the magnitude of said signal of said voltage feedback loop is direct proportion to the change of input voltage and is inverse proportion to the change of output power.

#### Abstract

~~An adaptive slope compensator is disclosed which is used for compensating the current loop and improving the circuit performance of current mode power converter. The slope compensator is modulated by a voltage feedback loop signal of power converter, the slope compensation signal can thus automatically adjusted to optimize its operating parameters. Furthermore, by synchronizing with the switching signal of power converter, the slope compensation signal is reset to zero in response to the off of switching signal, thereby eliminating the oscillation problem of no load operation encountered by prior slope compensation designs.~~